III. Remarks

The disclosure has been editorially revised. No new subject matter has been added.

Claims 1 to 4, 6 to 8 and 11 have been amended. Claims 1 to 13 remain pending the present application. Claims 1 and 8 are independent.

In the Official Action, the Examiner has rejected claims 1, 2, 8 and 9 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,752,881 to Griffiths et al. ("Griffiths"). Claims 3 to 5 and 10 to12 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Griffiths. Claims 6, 7 and 13 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Griffiths in view of U.S. Patent No. 6,907,363 to Wyant et al. ("Wyant"). Applicant respectfully submits that the Examiner's objections in view of the cited references are inappropriate for the reasons set forth below.

According to one aspect of the Applicant's invention as defined by independent claim 1, Applicant provides an apparatus for conducting geophysical surveys comprising at least one multi-conductor cable having a plurality of take-out locations and a controller transmitting a coded command signal having a first portion that is modifiable to identify a specific take-out location and a second portion identifying a specific conductor of the cable to connected to ground at the specific take-out location. A plurality of interchangeable addressable switches is connected in series to the cable at selected ones of the take-out locations. Each of the switches is operable to receive and modify the first portion of the command signal and to transmit the command signal so modified to an adjacent one of the switches. Upon receipt of a coded command signal each switch examines the first portion thereof to determine if the coded command signal is addressed thereto. If not, the switch modifies the first portion and transmits the modified coded command signal to the adjacent switch and if so, the switch connects the specific conductor to ground in accordance with the second portion of the coded command signal.

In contrast, Griffiths discloses a resistivity surveying apparatus comprising a base station including a computer and a resistivity meter and reels along a multi-line cable. Each reel comprises an identical microcomputer circuit for connecting an electrode to a resistivity measuring line under the control of the computer. Each circuit and electrode is referred to as a substation. In operation, the electrodes are driven into the ground at spaced locations. The free end of one of the cables is connected to the base station and the remaining cables are connected in series. For each measurement four (4) electrodes are selected. To ensure that each of the four lines is properly connected, the microcomputer of one substation sends a response to the computer. If the response is in order on one connection, then the connection at the next substation is similarly interrogated. The step of moving to the next substation is described as the "incrementing of the variables NORS". Once the four substations have confirmed that they are properly connected to the desired lines in the cable, a measurement of resisitivity is made using two of the substations as current electrodes and the other two substations as potential electrodes.

Contrary to the Examiner's allegations, Griffiths in no way teaches or suggests the use of a coded command signal having a first portion that is modifiable to identify a specific take-out location and a second portion to identify a specific conductor of the cable to be connected to ground at the specific take-out location, wherein when a switch receives the coded command signal, the switch examines the first portion to determine if the coded command signal is addressed thereto, if not, the switch modifies the first portion and transmits the modified coded command signal to the adjacent switch and if so, the switch connects the specific conductor to ground in accordance with the second portion of the coded command signal. The only incrementality referred to by Griffiths is the sequence of checking each substation in turn to determine that is connected to the desired line in the cable before the resisitivity measurement is made.

Wyant discloses an apparatus and method for automatic measurement of insulation resistances of a multi-conductor cable. The apparatus comprises a power supply source, an input measuring means, an output measuring means, a plurality of input relay controlled contacts, a plurality of output relay controlled contacts, a relay controller and a computer. The apparatus uses either voltage or current for input and output measured variables.

Similar to Griffiths, Wyant fails to teach or suggest use of a coded command signal having a first portion that is modifiable to identify a specific take-out location and a second portion identifying a specific conductor of the cable to connected to ground at the specific take-out location wherein upon receipt of a coded command signal by a switch, the switch examines the first portion thereof to determine if the coded command signal is addressed thereto, if not, the switch modifies the first portion and transmits the modified coded command signal to the adjacent switch and if so, the switch connects the specific conductor to ground in accordance with the second portion of the coded command signal.

In view of the above, Applicant respectfully submits that independent claim 1 distinguishes patentably over Griffiths either alone or in combination with Wyant and should be allowed. As claims 2 to 7 are dependent either directly or indirectly on independent claim 1, which is deemed allowable, Applicant respectfully submits that these claims should also be allowed. Independent claim 7 defines a method of conducting geophysical surveys along a multi-connector cable having a plurality of take-out and recites subject matter analogous to the subject matter recited in independent claim 1. Accordingly, Applicant respectfully submits that this claim and the claims dependent thereon distinguish patentably over the cited prior art and should be allowed.

CONCLUSION

In view of the above, it is believed the application is in order for allowance and action to that end is respectfully requested.

Respectfully submitted,

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7/7/06
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